Abstract of the disclosure

A park brake system for vehicles is provided that has an actuator with an electric drive motor (36, 38) and an electronic control unit. A reduction gear has an input connected to the output of the electric motor and a pull force output member (56) for connection to mechanical brakes of the vehicle. The reduction gear has an input connected to the output of the electric motor. A command unit is connected to the electronic control unit. The reduction gear comprises a first reduction train and a second reduction train. The first reduction train includes a worm gear (42, 44) and the second reduction train includes a threaded spindle (46) and a screw nut (50) engaged with the spindle (46). The worm gear connects the spindle (46) to the output of the electric motor (36, 38). The pull force output member (56) is connected to the screw nut (50). The two-step reduction gear ensures the required high rate of reduction to generate high pull forces with a relatively compact electric motor. The worm gear used in the first reduction train has a high efficiency, and the threaded spindle and screw nut in the second reduction train allow for a self-locking feature.

Fig. 2